hostels, there remains this term a long waiting list of students wishing to come into residence. It is hoped that the appeal will enable the college to make provision for the increased demands made upon it by the attention now given to higher education for women.

SOCIETIES AND ACADEMIES.

London.

Zoological Society, October 21.—Prof. E. W. MacBride, vice-president, in the chair.—E. G. **Boulenger**: Report on the research experiments on methods of rat destruction carried out at the society's gardens.—Dr. A. Smith **Woodward**: The zoological position and affinities of Tarsius.

Paris.

Academy of Sciences, October 13.—M. Léon Guignard in the chair.—C. **Moureu** and C. **Dufraisse**: The stabilisation of acrolein. The methods of spontaneous alteration of acrolein. The spontaneous transformation into disacryl, the soluble resin, appears to be a modification undergone by pure acrolein. Acrolein purified with the greatest care always underwent this spontaneous condensation on standing. The speed of transformation can be modified by light, high temperature, and the presence of impurities.—R. **Bourgeois**: A collection of paintings of clouds.—M. **Leblanc**: Very rapid rotations.—P. **Boutroux**: A family of multiform functions, integrals of a differential equation of the first order.—J. **Andrade**: The weighing of a friction during the relative sliding of two solids in contact.—E. **Belot**: The movement of translation of a gaseous vortex ring in a resisting medium.—H. **Vanderlinden**: The ephemeris of the Borrelly comet, 1919*c*.—G. **Sagnac**: The absolute mechanics of waves and the Newtonian relativity of energy.—Q. **Majorana**: Gravitation.—G. **Claude**: The industrial employment of extremely high pressures. In compressing gases to pressures of 1000 atmospheres, no difficulties may be expected to arise in the pumps of the compressors or in the receivers, which can easily be made of sufficient strength to give security. The real difficulty will arise in the connections, which must be absolutely tight if serious losses are to be avoided. The author has constructed apparatus which, after charging with gas compressed to 1000 atmospheres and immersing in water, allowed no bubbles of gas to escape.—A. **Bolland**: Microchemical reactions of thiosulphuric acid.—V. **Cremieu** and A. **Lepape**: The separation by solidification of pure carbon dioxide from a gaseous mixture. Starting with a mixture containing 95 per cent. of carbon dioxide, cooling to 80° C., and compressing slightly, the solid carbon dioxide precipitated is chemically pure.—J. **Guyot** and L. J. **Simon**: The action of concentrated sulphuric acid on methyl alcohol.—J. **Révil** and P. **Combaz**: The age and the conditions of formation of the lignites of Voglans in the Chambéry region. A discussion and criticism of the views recently put forward by M. Gorceix.—J. **Barthoux**: Succession of old eruptive rocks in the Arabian Desert.—J. **Pellegrin**: New contribution to the ichthyological fauna of Lake Tchad.—F. **Ladreyt**: The complex symbiotic cell.—J. **Amar**: Respiration in confined air.—F. **Bordas**: The preparation and conservation of sera and vaccines by drying in an absolute vacuum. The vaccines are dried in a high vacuum and the water-vapour evolved is removed by freezing. After drying, the tube is sealed and the vaccine thus removed from the action of both water and oxygen. The activity of such preparations can be preserved for several years.

October 20.—M. Léon Guignard in the chair.—M. **Henneguy**: An account of the work of the late Gustav Retzius.—G. **Bigourdan**: A project of uranographic classification, completing other classifications in present use.—A. **Blondel**: The characteristics of oscillation of lamps with three electrodes, utilised as generators of sustained oscillations.—M. **de Chardonnet**: Remark on a communication of Gen. Bourgeois. The use of autochrome plates instead of hand-paintings for clouds is suggested as being more practical. As regards the question of the stability of the images, some coloured photographs of the sky taken ten years ago, now presented to the Academy, are still in a good state of preservation.—M. **Petrovitch**: Definite integrals, of which the decimal part is expressed with the aid of prime numbers.—G. **Kolossoff**: The movement of a solid in an indefinite liquid.—A. **Foch**: The resonance of water-mains provided with an air-chamber.—A. **Bichet**: A system of aiming at objects in the air. Suggestions for a new means of mounting telescopes, searchlights, and guns for improving the aim at moving objects in the air.—G. **Chavanne**, L. P. **Clerc**, and L. J. **Simon**: Analyses of German aviation petrols. The results given were obtained by a combination of careful fractional distillation with the measurement of the critical solution temperature of the fractions in aniline, details of which have been given in earlier communications. Twenty specimens were examined, the composition of which averaged 10 per cent. aromatic hydrocarbons, 40 per cent. saturated cyclic hydrocarbons, and 50 per cent. paraffins. The deviations of the separate specimens from the average were very small.—P. **Robin**: The peroxide of benzaldoxime. A study of the decomposition by prolonged boiling in benzene solution, and of the prolonged oxidation with iodine and sodium carbonate.—J. **Barthoux**: Cretacean volcanic rocks of Egypt and Sinai.—G. B. M. **Flamand**: The discovery of a lens of coal at Port-Gueydon. Two analyses are given, together with reasons for supposing that this deposit really belongs to the Coal Measures.—M. **Bezagu**: Variations of the respiration of leaf-cells with age.—A. **Sartory**: A new fungus of the genus Scopulariopsis isolated from a case of onychomycosis.

BOOKS RECEIVED.

The Philosophy of Conflict, and Other Essays in War-time. By H. Ellis. Second series. Pp. 299. (London: Constable and Co., Ltd.) 6*s*. 6*d*. net.

Organic Chemistry for Students of Medicine. By Prof. J. Walker. Second edition. Pp. xi+332. (London: Gurney and Jackson.) 10*s*. 6*d*. net.

Essays in Common Sense Philosophy. By C. E. M. Joad. Pp. 252. (London: The Swarthmore Press, Ltd.) 8*s*. 6*d*. net.

The Struggle in the Air, 1914–1918. By Major C. C. Turner. Pp. viii+288. (London: E. Arnold.) 15*s*. net.

Iron Bacteria. By Dr. D. Ellis. Pp. xix+179+v plates. (London: Methuen and Co., Ltd.) 10*s*. 6*d*. net.

The Venereal Problem. By E. T. Burke. Pp. 208. (London: H. Kimpton.) 7*s*. 6*d*. net.

Some Wonders of Matter. By the Right Rev. J. E. Mercer. Pp. 195. (London: S.P.C.K.) 5*s*. net.

Joseph Dalton Hooker. By Prof. F. O. Bower. Pp. 62. (London: S.P.C.K.) 2*s*. net.

Herschel. By the Rev. H. Macpherson. Pp. 78. (London: S.P.C.K.) 2*s*. net.

The Profession of Chemistry. By R. B. Pilcher. Pp. xiv+199. (London: Constable and Co., Ltd.) 6*s*. 6*d*. net.

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Cambridge University Calendar for the Year 1919–1920. Pp. xxvi + 1125. (Cambridge: At the University Press.) 15*s*. net.

Notes on Magnetism: For the Use of Students of Electrical Engineering. By C. G. Lamb. Pp. viii + 94. (Cambridge: At the University Press.) 5*s*. net.

A Text-book of Quantitative Chemical Analysis. By Dr. A. C. Cumming and Dr. S. A. Kay. Third edition. Pp. xv + 416. (London: Gurney and Jackson.) 12*s*. 6*d*. net.

Just Look! or, How the Children Studied Nature. By L. B. Thompson. Pp. viii + 204 + 58 plates. (London: Gay and Hancock, Ltd.) 5*s*. net.

DIARY OF SOCIETIES.

THURSDAY, NOVEMBER 13.

Royal Society, at 4.30.—Lt.-Col. R. McCarrison: The Genesis of Œdema in Beriberi.—W. Robinson: The Microscopical Features of Mechanical Strains in Timber and the Bearing of these on the Structure of the Cell-wall in Plants.—W. B. Bottomley: The Effect of Nitrogen-fixing Organisms and Nucleic Acid Derivatives on Plant Growth.—Agnes Arber: The Vegetative Morphology of *Pistia* and the Lemnaceæ.—W. J. Young, A. Breinl, J. J. Harris, and W. A. Osborne: Effects of Exercise and Humid Heat upon Pulse Rate, Blood Pressure, Body Temperature, and Blood Concentration.

Royal College of Physicians, at 5.—Dr. E. G. Browne: The Origins and Development of Arabian Medicine: II. Four Great Medical Writers of Persia (IX.-XI. Cent.). (FitzPatrick Lecture.)

Royal Society of Medicine (Clinical Section), at 5.—H. Curtis: Three Cases of Malignant Disease of the Face illustrating Modern Methods of Radical Operation.

Institution of Electrical Engineers (at Institution of Civil Engineers), at 6.—Roger T. Smith: Presidential Inaugural Address.

Optical Society, at 7.30.—Miss L. M. Gillman: The Chromatic Variation of Spherical Aberration in Cemented Doublets.—Instructor-Commander T. Y. Baker: The Correction of First Order Astigmatism of a Single Lens used with a Stop.

Royal Society of Medicine (Neurology Section), at 8.30.—P. Sargent: Lessons of the War applied to Spinal Surgery.

FRIDAY, NOVEMBER 14.

Royal Astronomical Society, at 5.—W. S. Franks: Micrometrical Measures of Double Stars, List VII.—E. Strömgren: A New Class of Periodic Solutions in the General Problem of Three Bodies.—J. Evershed: (1) Is Venus Cloud-covered? (2) The Solar Prominence of 1919, May 29.—J. Halm: Statistical Investigation of the Distribution of the Stars and their Magnitudes.—H. H. Turner and Mary A. Blagg: The Long-period Variable W Cygni.—N. Liapin: A Method of Determining the Mean Accidental Variation in Daily Rate of a Number of Chronometers.—H. Bell: A Proposal to Construct New Tables for Finding Position-lines at Sea.—The following Paper is promised:—Royal Observatory, Greenwich: Corona and Prominences at the Eclipse of 1919 May 29.

Physical Society, at 5.—S. Butterworth: The Self-Inductance of Single Layer Flat Coils.—Dr. N. W. McLachlan: An Experimental Method of Determining the Primary Current at Break in a Magneto.—F. W. Newman: Note on a Modified Form of Wehnelt's Interrupter. (With Demonstration.)

Malacological Society of London (at the Linnean Society), at 6.—G. C. Robson: Studies in British Hydrobiidæ, Part I.—H. C. Fulton: Description of a New Sub-species of *Papuina tayloriana*, Ad. & Rve.—J. E. Cooper: Additions to a List of Recent Middlesex Mollusca.

SATURDAY, NOVEMBER 15.

Physiological Society (at London School of Medicine for Women), at 4.30.

Institution of Electrical Engineers (Informal Meeting) (at Chartered Institute of Patent Agents), at 7.—W. E. Warrilow and others: Discussion on Engineering Advertising.

Surveyors' Institution (Junior Meeting), at 7.

MONDAY, NOVEMBER 17.

Royal Institute of British Architects, at 8.—W. R. Davidge: The Problems of London Housing.

Royal Geographical Society (at the Æolian Hall), at 8.30.—Sir Alfred Sharpe: A Recent Journey in Liberia.

TUESDAY, NOVEMBER 18.

Royal Horticultural Society (at Vincent Square, S.W. 1), at 3.—C. H. Senn: Potato Possibilities.

Royal Society of Medicine, General Meeting of Fellows, at 5.

Royal Statistical Society, at 5.15.—E. H. Godfrey: Fifty Years of Canadian Progress, 1867–1917.

Institution of Civil Engineers, at 5.30.—M. F. Wilson: Admiralty Harbour, Dover

Institution of Petroleum Technologists (at Royal Society of Arts), at 5.30.—Rear-Admiral (Retd.) P. Dumas: The Conservation of Oil.

Zoological Society of London, at 5.30.—Sir Edmund Giles Loder, Bt.: Exhibition of the Skull of a Beaver.—Major J. S. Hamilton: Field-Notes on some Mammals in the Bahr el Gebel, Southern Sudan.—Dr. J. F. Gemmill: (1) The Development of the Mesenteries in *Urticina crassicornis* (Actinozoa). (2) The Leptomedusan *Melicertidium octocostatum*.—M. Turner: The Nematode Parasites of a Chapman's Zebra.—Rev. A. H. Cooke: The Radula of the Mitridæ.—Lt.-Col. S. Monckton Copeman: Experiments on Sex Determination.—Dr. C. F. Sonntag: The Variations in the Digastric Muscle of the Rhesus Macaque and the Common Macaque.—E. S. Russell: Note on the Righting Reaction in *Asterina gibbosa*, Penn.

WEDNESDAY, NOVEMBER 19.

Royal United Service Institution, at 3.—D. Ogg: German Naval Propaganda.

Royal Society of Arts, at 4.30.—Sir H. Trueman Wood: Science and Industry.

Royal Meteorological Society, at 5.—Lieut. C. W. B. Normand: Effect of High Temperature, Humidity, and Wind on the Human Body.—Capt. A. J. Bamford: Some Observations of the Upper Air over Palestine.—E. G. Bilham: Barometric Pressure and Underground Water Level.

Geological Society of London, at 5.30.—Prof. J. E. Marr: The Pleistocene Deposits in the Neighbourhood of Cambridge.

Institution of Electrical Engineers (Wireless Sectional Meeting) (at Institution of Civil Engineers), at 6.—Prof. C. L. Fortescue: The Design of Multiple Stage Amplifiers using Three Electrode Thermionic Valves.

Royal Microscopical Society, at 8.—H. M. Carleton: Note on Cajal's Formalin-silver Nitrate Impregnation Method for the Golgi Apparatus.—F. I. G. Rawlins: Report on the Collection of Metallurgical Specimens recently presented to the Society by Sir Robert Hadfield, Bart., F.R.S.

THURSDAY, NOVEMBER 20.

Royal Society, at 4.30.—*Probable Papers*: W. J. Johnston: A Linear Associative Algebra suitable for Electro-magnetic Relations and the Theory of Relativity.—Sir Joseph Larmor: Note on Mr. W. J. Johnston's Calculus for Generalised Relativity.—G. E. Bairsto: The Variation with Frequency of the Conductivity and Dielectric Constant of Dielectrics for High Frequency Oscillations.—F. J. W. Whipple: Equal Parallel Cylindrical Conductors in Electrical Problems.—G. A. Schott: The Scattering of X- and Y-Rays by Rings of Electrons. A Crucial Test of the Electron Ring Theory of Atoms.

Linnean Society, at 5.—T. K. Patten: Plants collected in Mesopotamia and in Southern India.—C. C. Lacaita: *Orchis maculata* from Monte Gargans.—Dr. G. C. Druce: Two New British Plants.—Miss Trower: Paintings of British *Rubi*.—Prof. R. C. McLean: Sex and Soma.

Institution of Mining and Metallurgy (at Geological Society), at 5.30.—H. L. Sulman: A Contribution to the Study of Flotation.

Chemical Society (and Informal Meeting), at 8.

FRIDAY, NOVEMBER 21.

Institution of Mechanical Engineers, at 6.—C. G. Conradi: The Present Position of Mechanical Road Traction.

Institution of Electrical Engineers (Students' Meeting) (at the City and Guilds (Engineering) College), at 7.—A. P. Trotter: Opening Address.

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